abcam

Product datasheet

Anti-Glycogen synthase 1/GYS1 antibody [EP817Y] - BSA and Azide free ab231693

KO VALIDATED Recombinant RabMAb

4 Images

Overview

Product name	Anti-Glycogen synthase 1/GYS1 antibody [EP817Y] - BSA and Azide free
Description	Rabbit monoclonal [EP817Y] to Glycogen synthase 1/GYS1 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, Flow Cyt, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human Glycogen synthase 1/GYS1 aa 700-800 (C terminal). The exact sequence is proprietary.
Positive control	HeLa whole cell lysate (ab29545) can be used as a positive control in WB.
General notes	ab231693 is the carrier-free version of ab40810 This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes. Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency. Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. Ab231693 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm. *Maxpar® is a trademark of Fluidigm Canada Inc.* This product was previously labelled as Glycogen synthase 1 This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information see here. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents. Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP817Y
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab231693** in the following tested applications.

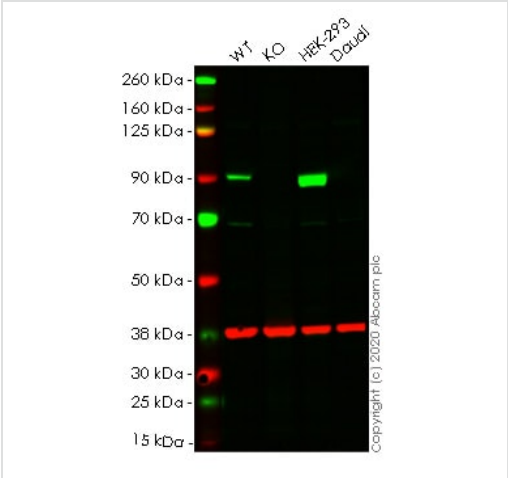
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 85 kDa (predicted molecular weight: 81 kDa).
Flow Cyt		Use at an assay dependent concentration. ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		Use at an assay dependent concentration.

Target

Function	Transfers the glycosyl residue from UDP-Glc to the non-reducing end of alpha-1,4-glucan.
Pathway	Glycan biosynthesis; glycogen biosynthesis.
Involvement in disease	Defects in GYS1 are the cause of muscle glycogen storage disease type 0 (GSD0b) [MIM:611556]; also known as muscle glycogen synthase deficiency. GSD0b is a metabolic disorder characterized by fasting hypoglycemia presenting in infancy or early childhood. The role of muscle glycogen is to provide critical energy during bursts of activity and sustained muscle work.
Sequence similarities	Belongs to the glycosyltransferase 3 family.

Images



Western blot - Anti-Glycogen synthase 1/GYS1 antibody [EP817Y] - BSA and Azide free (ab231693)

All lanes : Anti-Glycogen synthase 1/GYS1 antibody [EP817Y] (ab40810) at 1/10000 dilution

Lane 1 : Wild-type HeLa lysate
Lane 2 : Glycogen synthase 1/GYS1 knockout HeLa lysate
Lane 3 : HEK-293 lysate
Lane 4 : Daudi lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

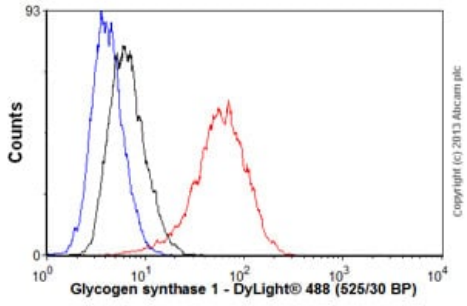
Predicted band size: 81 kDa

This data was developed using the same antibody clone in a different buffer formulation (ab40810).

Lanes 1-4: Merged signal (red and green). Green - ab40810 observed at 80 kDa. Red - loading control ab8245 observed at 37 kDa.

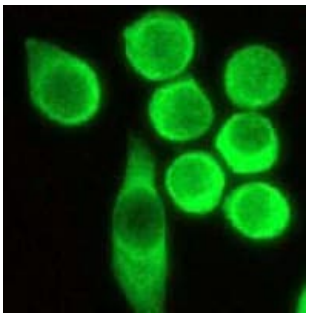
ab40810 Recombinant Anti-Glycogen synthase 1/GYS1 antibody [EP817Y] was shown to specifically react with Glycogen synthase 1/GYS1 in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265388 (knockout cell lysate ab257462) was used. Wild-type and Glycogen synthase 1/GYS1 knockout samples were subjected to SDS-PAGE. ab40810 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 10000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse

IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Flow Cytometry - Anti-Glycogen synthase 1/GYS1 antibody [EP817Y] - BSA and Azide free (ab231693)

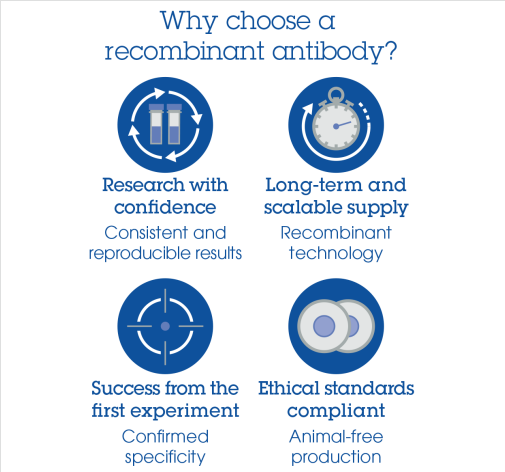
Overlay histogram showing HEK293 cells stained with ab40810 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab40810, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in HEK293 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab40810).



Immunocytochemistry/ Immunofluorescence - Anti-Glycogen synthase 1/GYS1 antibody [EP817Y] - BSA and Azide free (ab231693)

ab40810 at a 1:250 dilution staining Hela cells using anti-Glycogen Synthase 1/GYS1 RabMAb.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab40810).



Anti-Glycogen synthase 1/GYS1 antibody [EP817Y] - BSA and Azide free (ab231693)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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